Antibiotics Susceptibility Pattern in Vancomycin Resistant Staphylococcus aureus Isolated from Hosbital Staff and Patients in Gorgan

Somayeh Rahimi Alang*[1]; Abolfazl Amini[2]; Sara Yazarlou[3]; Ezzat Allah Ghaemi[3]

1-Young Researchers Club, Gorgan Branch, Islamic Azad University, Gorgan, Iran

2-Laboratory Science Research Center and Department of Laboratory Science , School of Paramedical, Golestan University of Medical Sciences, Gorgan, Iran

3-Infectious Diseases Research Center, Golestan University of Medical Sciences, Gorgan, Iran

s.rahimi25@gmail.com

Background & Objectives: Vancomycin is frequently the antibiotic for the treatment of infections caused by methicillin resistant *Staphylococcus aureus* (MRSA). For the last years, the incidence of vancomycin intermediate S. aureus (VISA) and vancomycin resistant S. aureus (VRSA) has been increased in the world; this will lead to many concerns. The aim of this study was evaluate antibiotics susceptibility pattern in VRSA isolated from hospital staff and patients in Gorgan.

Methods: 80 and 90 *S. aureus* were isolated from hospital staff in three hospitals and patients in gorgan, respectively. Minimum inhibitory concentration (MIC) of vancomycin was performed by vancomycin Etest according to CLSI (Clinical and Laboratory Standards Institute) guidelines and disc diffusion test was used to detect resistance to vancomycin; and also for determination susceptibility to others antibiotics performed disc diffusion test.

Results: Our study showed two of isolates (one of staff and one of patients) were resistant to vancomycin (MIC 256>µg/ml) and both of them were sensitive to ciprofloxacin and imipenem and were resistant to amoxicillin, ampicillin, penicillin, cephotaxime.

Conclusion: According to our study, imipenem and ciprofloxacin can be an appropriate candidate for treatment such isolates. Limiting use of vancomycin in infection disease that have alternative treatment. Continual monitoring of MIC level of *S. aureus* in carrier staff in hospitals, special in high risk sections could be considered.

Keywords: VRSA; MIC; Disk Diffusion; Hospital Staff; Gorgan